

*Thurber Med. Assoc. - xx*

TRANSACTIONS

OF THE

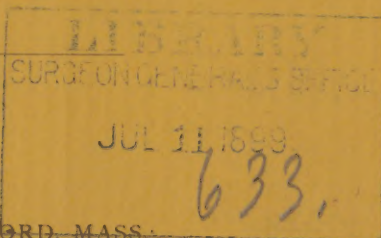
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Thurber Medical Association,

AT ITS

Forty-Second Annual Meeting

HELD AT

MILFORD, MASS., OCTOBER 3, 1895.



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G. M. BILLINGS, PRINTER, GAZETTE OFFICE.  
1896.



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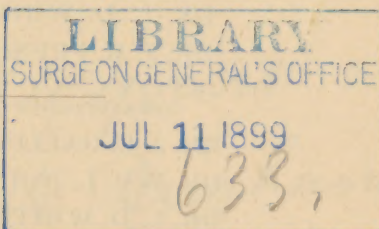
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# OFFICERS.

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## PRESIDENT.

DR. AMBROSE J. GALLISON, Franklin.

## VICE-PRESIDENT.

DR. WILFRED W. BROWNE, Blackstone.

## SECRETARY.

 DR. JOHN MARSHALL FRENCH, Milford.

## TREASURER.

DR. CHARLES MACKIN, Milford.

## LIBRARIAN.

DR. CHARLES H. COLE, Milford.

## ORATOR.

DR. J. CUSHING GALLISON, Franklin.

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DR. LEONARD D. WHITE, Uxbridge.

## LIBRARY COMMITTEE.

DR. CHARLES H. COLE, Milford.

DR. L. D. WHITE, Uxbridge.

DR. J. M. FRENCH, Milford.

## COMMITTEE ON NECROLOGY.

DR. J. C. GALLISON, Franklin.

DR. WM. L. JOHNSON, Uxbridge.

DR. L. D. WHITE, Uxbridge.

MASSACHUSETTS MEDICAL SOCIETY.

LIBRARIAN'S OFFICE,

19 BOYLSTON PLACE, BOSTON, MASS.

EDWIN H. BRIGHAM, M. D.  
LIBRARIAN.

Feby. 26. 1896.

In answer to Communication of

189

N. John M. French,  
Dear Doctor:

I recd. from  
Sec. of the Trans. Hunter  
Med. Assn. 42d. Annual  
Meeting, 1895. If there  
are other published  
can you kindly favor  
the Society with them.

Truly yours.

Edwin H. Brigham.  
Librarian.

Over

Wilmington, Mass., Feb. 26, 1861

Dear Doctor:

This was the first time we  
have ever printed our Trans-  
actions. Should we publish  
others in future years, shall  
be pleased to send them to you.  
Let me suggest the propriety of  
sending a copy of the Proceedings  
of the Mass. Med. Soc. for  
our library. I will see that  
it is placed there. If you  
will send me one. Of course  
I have a copy, but many  
of our members do not belong  
to the State Society.

Respectfully,

J. M. Grueh.

Secretary.



## PROCEEDINGS.

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The forty-second annual meeting of the Thurber Medical Association was held in the office of Dr. Chas. H. Cole, 161 Main street, Milford, on Thursday, Oct. 3, 1895, at 2 o'clock p. m.

The meeting was called to order by the president, Dr. Leonard D. White of Uxbridge.

The records of the last monthly meeting were read and approved, after which the secretary presented his annual report, as follows:—

MILFORD, MASS., Oct. 3, 1895.

To the officers and members of the Thurber Medical Association:—

In accordance with the custom of this society, your secretary begs leave to present the following report of the condition of the Association, and the business done during the year ending Sept. 30, 1895.

The number of members reported one year ago was 29. During the year four persons, Dr. Lorenzo Chapman of Wrentham, Dr. H. F. R. Watts of Franklin, Dr. Ralph C. Fish of Hopedale, and Dr. W. W. Browne of Blackstone, have been admitted to membership; one, Dr. George E. Bullard of Blackstone, has been reinstated; two, Dr. F. A. Wilmarth and Dr. J. S. Boynton, have been permitted to resign on account of removal; one, Dr. I. C. Pope of Holliston, has been dropped from the roll on account of nonpayment of dues; and one, Dr. John Barns of Milford, has been taken away by death. The present membership is 30, a net increase of one, and the largest ever reported.

Nine meetings have been held during the year. The average attendance has been  $7\frac{1}{2}$ . Twenty members have been present at one or more meetings. Ten papers have been read, as follows:—

"The Germ Theory," by Dr. Blake; "The Prevention of Syphilis," by Dr. Cole; "Electro-Therapeutics," by Dr. Fish; "Notes on Trional," "Doctor Daniel Thurber," and "A Case of Gunshot Wound of the Liver," by Dr. French; "Recent Progress in Diseases of the Blood," by Dr. J. C. Gallison; "Lights and Shadows of a Doctor's Life," (Annual Address for 1894),

by Dr. Patten; "Insomnia and Hypnotics," and "Surgically Clean," by Dr. L. D. White.

During the year I have collected from the members for dues and dinner tickets, \$63, of which \$59 has been turned over to the treasurer and his receipt taken therefor, while the remaining \$4 is still in my possession, owing to the removal of the treasurer from the vicinity. Three members only are in arrears one year for dues. All others are paid to Oct. 1, 1895.

All of which is respectfully submitted.

J. M. FRENCH, Secretary.

The report was accepted.

In the absence of the Treasurer, the following statement of the financial condition of the Association was presented by the secretary:—

Dr.		
Balance in treasury Oct. 13, 1894,	\$ 6 82	
Received from secretary during the year,	59 00	
Now in hands of the secretary,	4 00	
Total receipts,		\$69 82
Cr.		
Paid secretary, postage and stationery,	\$ 2 81	
Paid G. M. Billings, printing, etc.,	11 00	
Paid Hotel Willian, annual dinner, 1894,	34 00	
Total payments,		47 81
Balance in treasury Oct. 1, 1895,		\$22 01

In addition to this, there is a fund of \$600 invested in the Milford Savings Bank, upon which there will be two years' interest due Oct. 12, 1895, amounting to \$49.44.

This statement was accepted in lieu of the report of the treasurer.

The Librarian then presented the following report:—

To the honorable gentlemen of the Thurber Medical Association, the Librarian submits the following report:—

It is much to be regretted that I must report on this occasion that recent additions of books voted to be placed in the library have not yet arrived; but it is expected that before the next regular monthly meeting these new volumes will be on the shelves. They are as follows:—

Dennis' System of Surgery, 4 vols.

Hamilton's Legal Medicine, 2 vols.

Gowers' Diseases of the Nervous System, 2 vols.

American Text-book of the Practice of Medicine, 2 vols.

Liebig and Rohé's Medical Electricity, 1 vol.



These books, in all eleven volumes, will cost \$54. Some of them have been ordered, and are now on the way.

The number of books on the shelves is 914. This does not include the Monroe and Metcalf libraries, which are packed away.

From two to three books are taken out on an average each month.

I have no recommendations to make.

Respectfully submitted,

CHAS. H. COLE, Librarian.

The report was accepted.

The following bills were then approved and ordered paid: G. M. Billings, printing, etc., \$5.80; J. M. French, postage, etc., \$1.80; Chas. H. Cole, expense, 55 cents.

It was voted that the amendment to the constitution, proposed at the last meeting, lay over until the next month.

It was voted to elect, with the other officers, a committee on necrology, of three members.

It was voted that one or more candidates be nominated for each office, and all be voted for on one ballot, by the Australian system.

The following persons were then nominated for the various offices:—

For president, A. J. Gallison.

For vice-president, W. W. Browne.

For secretary, J. M. French.

For treasurer, Charles Mackin, Chas. H. Cole.

For librarian, Chas. H. Cole.

For orator, J. C. Gallison.

For alternate, L. D. White.

For library committee, L. D. White, J. M. French.

For committee on necrology, J. C. Gallison, Wm. L. Johnson, L. D. White.

Dr. Cole declined to be a candidate for treasurer.

There being now but one candidate for each office, the secretary was instructed to cast the unanimous ballot of the society for the candidates named, which was done, and they were declared elected.

The secretary then read a memorial of Dr. John Barns, which was ordered published.

The Association then took a recess, and after paying the

annual dues, purchasing dinner tickets, and supplying themselves with samples of the goods of the Chas. H. Phillips Chemical Company, as exhibited by his agent, the members, with their ladies and invited guests, in all to the number of sixteen, seated themselves at the tables of Hotel Willian, where a bountiful repast was served, and enjoyed by all.

Those present at the dinner were: Dr. A. J. Gallison and wife, Rev. Bryant McLellan (chaplain), Rev. E. W. Whitney, Dr. Chas. Kingsley and wife, Dr. L. D. White and wife, Dr. Levi White and wife, Dr. William B. Nolen, Dr. Frank H. Jenckes, Dr. Charles Mackin, Dr. W. W. Browne, Dr. Chas. H. Cole, Dr. J. M. French.

At the close of the dinner, the company gathered in the parlor, and listened to an interesting, able and suggestive address on "Heredity and Education," by Dr. Chas. Kingsley.

Following the address, remarks were made by Revs. McLellan and Whitney, Drs. Nolen, L. D. White, Levi White, and others.

The only drawback to the general enjoyment of the occasion seemed to be in the small attendance, less than one-half as many being present as last year.

At half past five o'clock the meeting adjourned, and the members and guests departed for their homes.

Attest,

J. M. FRENCH, Secretary.



## IN MEMORIAM.

Died in Milford, Sept. 27, 1895, Dr. John Barns, aged  
78 years.

John Barns was born in Buckfastleigh, County of Devon, England, Oct. 24, 1817, and came to America in 1831. He studied medicine for three years with Dr. J. C. Harris of Ashland, a member of this society. He attended one course of lectures at the Berkshire Medical College in Pittsfield, Mass., and nearly completed his studies at the College of Physicians and Surgeons in New York City; but owing to the failure of a manufacturing company in which his means were invested, he was compelled to postpone, and finally to abandon his purpose of obtaining a degree, and engage at once in practice.

He came to Milford in 1854, and the next year was received into membership by the Massachusetts Medical Society and our own Association. He was, therefore, at the time of his death, the oldest member of our Association.

On April 30, 1863, he married Phæbe Battey, of Burrillville, R. I., who, with four adult children, survives him. He practised his profession in Milford for over 40 years, enjoying in his prime a large general practice, and also devoting special attention to the diseases of the eye and ear, in which branch he retained a considerable office business up to a short time before his death. He probably also made a greater use of electricity than any other physician in this vicinity.

He was a republican in politics, and in religious belief a member of the Society of Friends, as is also his wife.

Some 21 years ago he suffered from a severe attack of cerebro-spinal meningitis, and he never fully recovered from its effects. It was followed by a gradual breaking down of the nervous system, and finally by occasional attacks of hepatic and gastro-intestinal derangement, which increased in frequency and severity, and finally caused his death.

He was buried in Smithfield, Rhode Island, on Monday, September 30, the services being conducted by the Society of Friends, of which he was a member.

An obituary notice which appeared in the Milford Journal on the day of his death, contained the following just estimate of his life and character:—

“The deceased was of a quiet, self-contained, but most winning nature, upright and conscientious to an unusual degree, and especially devoted to whatever tended to elevate or ennoble humanity.

“He was an ardent lover and student of nature, and brought to the practice of his profession not only an acute intellect, but a sympathy that did much to brighten the sick room.

“Modest and unselfish, he did not seek office or political distinction, finding in his home life, his study of nature, and his circle of personal friends, all that sufficed to make life rich. Milford is the poorer for the departure of this good man.”

So, brothers of the Thurber Medical Association, our members are passing away. Only a few months ago, and our youngest was taken in the vigor of early manhood, falling in the thick of the fight. Now our oldest is gone, passing quietly away full of years and good deeds. Who can tell to which one of us next the summons may come? But of that little need we reckon, if of us it can be said when we are gone, as well it can be said of him, “He was a good citizen, a faithful physician, a Christian gentleman.”



# THE ANNUAL ADDRESS.

## HEREDITY AND EDUCATION.

BY CHARLES KINGSLEY, M. D., FRANKLIN.

The medical profession, standing today as it does at the head of the professions, is constantly making marked progress in scientific and social directions, ever tending in science to bring to the front the best men and measures. The peculiar and intimate relation between the profession and society fits it to bring before the public all that is latest and new. The enlargement of a physician's sphere is of modern date. Until recently nearly all the physicians believed (and possibly some still believe) that their office extends no farther than to administer medicine and collect fees. But today they stand as public advisers, and the requirements for a physician to practise are more than double what they were even a few years ago. Therefore, who are better qualified to make scientific discoveries and become the leaders of science as well as the leaders of the professions? Or who are better qualified to disabuse the popular mind of error? Or who can speak with more authority on problems affecting life and death?

That Providence causes death and disease and that it could be effected by no human hand was, and is now, by some the popular belief. True, Nature does cure, but without human aid she is as helpless as human power is without Nature's aid. While the mother was mourning over the death of her child, thinking that it was an act of Providence either for the punishment of some of her own sins or for the sins of its ancestors, our Kochs and Pasteurs were proving without doubt that these deaths were not due to any higher power, but were human crimes instead, and that one half of the diseases that carried off our youths before they reached manhood came through lack of knowledge of disease in general, and were for the most part preventable; and that it was not God, but man, that struck the cruel blow.

Who can demonstrate more effectually than a physician that a child not only will inherit his parents' form and features, but their crimes and vices as well? A child begotten of an intoxicated parent will as a rule inherit this tendency, for "as the twig is bent the tree inclines." The physician has carried the sanitary investigation into our homes, also into our school-rooms, making an advancement which is one of the most beneficial of the age. He has extended his work into the prisons, causing the dark, damp dungeons to be a thing of the past. Year after year physicians have fought for laws in our Legislatures, until now we have good sanitary laws, which year by year are rapidly lessening the mortality of infectious and contagious diseases.

But let us return to our subject, "Heredity and Education, their relations to each other and to the human race." Heredity is the law by which plants and animals transmit, or tend to transmit, their characteristics to their descendants. "Like begets like." Now reduced to a system and regulated by law, the evolution of human organism has been simply a system of heredity. Let the process of evolution start with the lowest form of animal life, or with the most primitive savage, the process of development lies through the same lines of heredity. Heredity is the most important, ever-acting and inevitable force by which man's destiny is determined. The ambitions of a family *may* reach through generation after generation, but the family traits are sure to be continued through each generation. Not only the most prominent, but the most minute points, lie in the child as well as in the parent. Human abilities and disabilities, virtues and vices, health and disease, degree of intelligence, whether it be genius, mediocrity or idiocy, all depend for the greater part on heredity, acting through variation, selection, and training. Special breeds of animals have been permanently established by observing these laws, and there can be no doubt that by the same process an improved race of men might be established.

Heredity does not mean improvement in each generation, —much to the contrary; for statistics will show that the last two or three generations show the evil effect of modern society life, and of other modern ideas which tend to weaken the children. Observation, experience and analogy agree that the



primitive man existed as a savage, but step by step he has been changed from that stage to a higher or lower form of civilization. The present state of the world affords us examples of all stages, from the lowest savage to the highest civilization. The chief factors in this development have been heredity and education. Let us take, for example, the primitive races of Australia and the highest civilization of Europe or of America: between these two extremes can be found all degrees, and an example to illustrate every step, even in the most minute points of evolution. Civilized man has 20 per cent more brain matter than the savage, 100 per cent more gray matter on the surface. All this comes from hereditary force and early education acting through tens of thousands of years. We have still farther examples, as when we attempt to raise, by education alone, the savage to the average civilized life. In some cases the improvement is sporadic in the brightest of the race, but even at its best it stops at the lowest points, showing that it can not be accomplished in one generation, but must come through a number of generations by heredity.

In view of the wide difference which we find in man's condition, we come to the conclusion that some races have learned more than others, and that their acquired wisdom has been saved and permanently transmitted to the race. This is the work of heredity handing down from one generation to the next the advancements it has made, and that generation, with its increased opportunities of education, keeps adding to what it already has inherited. Thus with proper care could be raised a wonderful race of human beings. Have we evidence that heredity is still at work, or have we as a race reached the summit of human perfection, where heredity can do no more? For a long time much attention has been paid to breeding domestic animals, most attention being given to dogs, horses, and cattle, and the results so far have been astonishing. There is nothing more interesting or instructive in the history of civilization than this breeding of special animals.

The lesson does not end in the study of brutes, but extends to, and involves human destiny. One man in his work on *Hereditary Genius* says: "I agree that as a new race can be obtained in animals and plants, and can be raised to so great a degree of purity that it will maintain itself, with moderate

care in preventing the more faulty members of the flock from breeding, so a race of gifted men might be obtained under exactly similar conditions." Man, savage or civilized, is an animal, and subject to the same laws that govern all animals below him. Whatever methods will improve animals, and will make a better and a higher class, can be applied to man as well.

The same methods of breeding if applied to man would produce results which would far surpass man's expectation; for man being a superior animal would meet with superior results. Take a select class of men and women and apply a system similar to the one applied to the American trotter. Wonderful would be the result, surpassing our most sanguine expectations; and in a few generations we should see a distinct and mighty race, as far above our present stage of civilization as we are at present above the Digger Indian. This is no idle theory, unsupported by facts. Take the history of the ancient Greeks. Where could such a grand and noble race of people be found? You cannot say that this was chance, for history tells of their system whereby none but the perfect were allowed to reproduce; and if a weakling were born he was not suffered to live. This system includes methods revolting to some of us, but you will all admit that the results were better than we have at the present day. Their first aim was to have a strong and heroic race, and for such a race they selected strong and heroic parents. In fact, they modeled men as they did marble, fashioning marble to man, and man to marble, and both stand unparalleled in sublime grandeur. Amid the shadowy chronicles of obscurity, the ancient Greek manhood and womanhood stands out as clear as the facades of their temples, as bold as their lofty columns, and as Jove-like as their inimitable statuary. But today the Greek civilization, and with it the grand race, has melted away, because the Greeks mixed their blood with inferior races, and gave the world mongrels, with which it remains content. It has been said on good authority that "if Athens had maintained its excellence and spread over large countries, displacing inferior population, (which it might well have done, as it was exceedingly prolific,) it would assuredly have accomplished results advantageous to human civilization that transcend our power of imagination."



The inherent capacity of man has never been fully tested. The inborn greatness of the human race has never been developed. Man's potentiality remains an unknown quantity in the great problem of Nature. Occasionally we have a glimpse of glory. Occasionally there may be thrown high upon the beach a Socrates, a Shakespeare, a Newton, or a Franklin, but the rapidly ebbing tide sinks back to the level of a sluggish sea, only to leave them there high upon the sands, far away from the common crowd. Man raises high his standard of ideality, as high as the Apollo Belvidere of the Greeks; but unlike the Attican, he neither plans nor labors to grasp his ideality. He has lofty aspirations which he never realizes, results which he conceives but to which he never attains, and in his disappointment he comforts himself with the hope of a better and immortal life in another world. Hope in another world! a thing commendable in itself, but it should not be indulged in to the extent of distracting our aims and ambitions from working out and accomplishing all that is best in this world, and the highest perfection to which by our birthrights we are entitled.

If a Shakespeare has lived, why may not one live again? What one man can attain, why cannot all average men? Why cannot an American reach the perfection of the ancient Greeks? Is it possible that we have reached the height of our perfection? Reason and self-pride revolt at the thought that the Greeks, Shakespeare, or any other attained their greatness by any chance or fate. But rather let us think that Nature, seeing the degeneration of mankind, sent out these few great men, or a great race, as an example, that through their greatness and high degree of perfection we might become ashamed of our ignorance, and be led on to attain the highest possibilities which are in our natures.

As I have said, no mind can conceive the latent potentiality of the human race. By proper efforts in the right direction man may be developed into a being grander than his loftiest ideals. When pure-bred dogs, male and female, are paired, the result is thorough-bred puppies, having the form, style, instinct and reason peculiar to the breed. But if a pure-bred dog be paired with one of inferior breed, the result will be the meanest of curs. What is true of the dog is true of all animals.

It is necessary to maintain purity of stock to have pure stock. The question naturally arises here, why it sometimes happens that great men often beget degenerate stock. Why do great families become extinct? Why did not Newton and Daniel Webster leave sons worthy of their sires? The Greeks answered this question when they mixed their blood with inferior races. If a thoroughbred horse be paired with one of a scrub stock, the colt will disgrace his sire, no matter how illustrious he might be. Cross breeding, breeding between pure and inferior stock illustrates the whole phenomena of race degeneracy, and on this subject nothing more need be said.

Where do anatomists find their comparison in the statement that perfect men and women are rare, if not in the perfect animals which are bred with so much care, while a perfect man constitutes the exception, not the rule? If it is rare to find a perfect man physically, how much more rare it is to find one perfect physically, mentally, and morally, that is to say, a perfect human being. If he is perfect physically he becomes a prize-fighter, or is marred in some way with a mental or moral defect. Do not conclude that Nature's powers are so limited that she exhausts them in making man perfect in one particular, and is compelled to leave him bankrupt in other qualities. We might as well say that if a man has a strong heart he must of necessity have a weak liver. But as we can see no perfect man, we may be inclined to believe that Nature is incompetent. We do see stout men with bad morals, weak men with strong minds, moral men with bad stomachs. If Nature can endow one man with one of these perfect points, why may she not bestow all three on one man, and show us a perfect being? She can; for man was made the image of the only perfect man, and she would make every man so, were it not for his own stubborn perversion of her laws.

Ignorance makes half-breeds of us all. Spencer well said, "To tens of thousands that are killed, add hundreds of thousands that survive with feeble constitutions, and millions that grow up with constitutions not so good or strong as they should be, and you will have some idea of the curse inflicted on their offspring by parents ignorant of the laws of life." It is sad to think that man, with his wonderful brain, and his wonderful hands, which, if exercised in the right direction, would

make him the monarch of all created things in every point, should be in breed inferior to the trotting horse, and in perfection inferior to the pointer or setter. Man has improved, some races more than others; but not in accordance with his advantages has he attained that standard of excellence reached by the Greeks two thousand years ago, nor has he improved as rapidly as the animals domesticated by him. The first step towards improvement is to teach the children that the inevitable obligation of individuals upon this earth is reproduction, the highest and noblest function of the animal economy. Habit and custom, religion, emotion and sentiment, and the passion and unreason which commonly control pairing in the human race today, all tend to defeat the practical application of this principle which is so promising to our race. We pride ourselves on our ancestry, and regard posterity with contempt. We deify the past, while in our ignorance, born of false modesty, we treat generations to come as if they were to inhabit some other planet. Let us try a change. Let us think less of the past, and turn our attention to the study of how our children may come into the world with strong constitutions, how they may walk, think, and act better than we. Then let the dead past bury its dead, and let us who are alive live understandingly with those who will succeed us in this struggle for existence. It only takes two to make a matrimonial bargain. The society, the race, or the state has nothing to do in the case except to promote all kinds of matches. No matter how ill-suited the two may be morally, physically, or mentally, the state can do nothing but sanction it. More diseases are spread through marriage than in any other way, and if we are ever to have a pure race, we must first take some steps towards preventing the propagation of bad and faulty individuals.

I would not for a moment say a word against the broad spirit of philanthropy which prompts the state to afford asylums to the insane and criminal classes. They cannot be treated too well, unless it is to be carried so far as allowing such classes to perpetuate their kind. Society can and does protect itself against deadly beasts and poisonous reptiles, but there are human beings more dangerous than the tiger or rattlesnake. Hundreds of dollars are freely contributed from this land for the support of the institution in Paris for treat-



ment and cure of persons bitten by dogs supposed to be mad. There are lurking poisons in the veins of some men more deadly, because more latent and widespread in their havoc on the race, than hydrophobia. No offspring is tainted with rabies, but hereditary crime, disease, and insanity infect children unborn, and spread a leaven of degeneracy throughout a nation of people. This kind of poison the state seems to have no right to prevent or destroy. The ancient Greeks rose up in their might and exterminated the individual who stood in the way of race improvement. With them the individual had no rights the race was bound to respect. We have reversed the rule, and practically today the race has no rights which the individual is bound to respect. To the human race the cost of reversing this rule has been terrible, aided by the old superstition that the only thing about man worthy of being cared for is his soul, the body no more worthy than the dust from whence it sprung.

The breeder looks for steady improvement; not so in man, who is, or should be, the highest of animals. Can it be that a body scarred with vice and polluted with disease will contain a soul as pure and grand as a soul contained in a body perfect and strong, as man should be? The only way to evangelize the world is to evangelize humanity. To make man better, you must improve the race. A young couple marry, never once thinking what their offspring will inherit. There is no manager to protect society and to guard the ill-mated pair against themselves. There is no mentor at hand to say to the man, "The woman you love comes from a family wherein there has long been drunkenness, or epilepsy, or insanity;" or to the woman, "The man whom you love and to whom you are about to bind yourself comes from a diseased family, or he himself carries in his blood a poison that will break out in his children." You may escape your hereditary destiny, but your children will be tainted.

To know ourselves not only as individuals, but to know our race, know its demands, know where it is weak and how it may be made strong, is knowledge of the most importance. Ignorance of the laws of life, and of our duty and how to perform it, causes nine-tenths of all woe. I wish there were some way whereby two people wishing to marry could know each other before, as they do two or three years after marriage.

The sins of a child are laid up against him, instead of the ancestor from whom the sin is inherited. The death of a child is attributed to its present surroundings, instead of the parent from whom it obtained that weak and diseased constitution.

What is the relation between heredity and education? Heredity transmits, education disciplines. Heredity transmits the gain made in one generation to the next, while education improves on those gains and passes them forward to be made permanent to the race by heredity. Heredity is the stock in trade, and education the gain to be added to the original stock. If heredity and education were allowed full sway in the right direction, and that is the direction they are inclined to take, they would increase the stock of human superiority as rapidly and as enormously as money kept at compound interest. They are correlative forces: the one adding to, the other saving; and thus the twin forces labor hand in hand through the ages. The best heredity is that which transmits a harmonious and symmetrical being, and that is the best education which develops and organizes the human being in all its normal proportions.

To comprehend the true nature of heredity and education and their relation is no easy task. The present craze in relation to the aim, scope and methods of education is due to the want of proper understanding on this point. When so many educators and school authorities are today sharing in the educational delusion now epidemic, it makes the case look well-nigh hopeless. Education is to develop all the faculties, giving undue prominence to none. The best results of a good education will be seen in that class, the members of which possess a more or less perfect physical, mental, and moral nature; and results not so good, where there is a deficiency in one or the other attribute. The poorest results will be obtained where there are faulty organization and faulty educational methods. A thief becomes shrewder, not better, by education. Education cannot make an athlete out of a cripple or a weakling, a scholar out of an idiot, or a moral man out of a child void of moral sense. In brief, the limit of education is determined by hereditary traits of the individual. If this be the case, and there can be no doubt that it is, heredity has more to do with a man's destiny than education. One young man may never acquire the taste for liquor,

no matter how much he may be thrown in the company of men who drink, while another young man cannot keep away from it, no matter how hard he tries to avoid it. The difference is in their inherited tastes.

As heredity has more to do with a person's destiny than education, we should pay more heed to bringing up sound children, as well as giving them good education. Where inherited tendencies are good it follows that the education will be much easier and more efficient. The savage had very little done for him by heredity, and see the difference between trying to educate the savage and the Anglo-Saxon child. Take the children in any town, and give them the best of instruction, and you will see from the very start a wide difference in the aptitude of the pupils for acquiring knowledge and discipline, a difference that will grow more and more marked until the completion of their education. Look farther, and you will find that difference not in the scholar's unwillingness to try, but in his hereditary traits, individually considered. Look into any school and you will find one that will easily keep the lead of his class from the start. He learns as if by intuition; it is no special effort, because it is inherited genius; you will find others who are above the average and who have little trouble in keeping there; things come so easily to them because of their inherited talents; their ancestors did much for them. Then you will find possibly a number of dull ones always lagging behind, yet with some of them trying hard to keep up, until they are all discouraged. Be patient with them, for their dullness is inherited. But the majority of these pupils are moderately good scholars, able to keep along with hard study and close application to work, and at the close of school life are able to perform the duties required of them with credit and success. Education does the most for this class, and the method of education based upon a standard that will fit the average scholar is the method that will do the most universal good to the human race. But mark you that no amount of education will raise the average class to the rank of talent, much less of genius, any more than you can raise the dullard to the average rank.

The popular notion shared by some educators is that the mind of a child is an empty receptacle, into which can be poured



all kinds and quantities of knowledge. This being true, each young head can contain an equal amount of knowledge, an equal value being given to every unit. On account of this theory comes the high pressure system of schooling called "cramming." By this system our schools are turned into brain factories, run by routine; our teachers the machine, our pupils the raw material; the one to grind, the other to be ground, in the educational mill. People can be divided into five classes: the idiot, the dunce, the average, the talented, and the genius. The school can do but little for the idiot, and it really does but little for the genius, for he will learn even if there are no schools. Nature and society are for him a great school. Place him in a vast wilderness, and he will find knowledge in the rocks and trees. Genius, not education, gave the world Homer, Socrates, Shakespeare, and Bonaparte. Had Homer or Shakespeare attended our modern school, and been obliged to confine his attention wholly to a few branches only for nine or ten months out of the twelve, the world might have lost his genius. It seems that our educators have hit wide of the mark, and have put into our schools too much of a force system, too many branches, too much cramming without any special aim, which only tends to break down health and destroy individuality, and which interferes with the natural bent of youthful minds. Its aim seems to be to make an average scholar of each one, whether he be a genius or an idiot, with the result that it makes the dunce duller, and does not give the genius the liberty of thought he requires.

When a special set of muscles of the animal economy is developed while others are inactive, the former improves, while the latter degenerates. The prize fighter directs all his efforts to develop muscles, neglecting his mind and morals. A hard student will direct all his efforts toward developing his brain, neglecting his muscles. Education in both cases is bad in method and result, and which is worse is hard to say. Big heads and thin legs, strong legs and small heads, strong brain and weak stomach, and vice versa, are all legacies of these educational methods, and fatal steps toward the extinction of American manhood. As I have said, it will not do to develop even as good an organ as the brain at the expense of the muscles. The true man is one with mind, body and morals sym-

metrically proportioned. And the true education is their harmonious development.

The object aimed at in our schools today is to develop the mind, and to that end parents send their children to school. I am glad to say that improvement in manual exercise is gradually taking place in our public schools, but as a rule it is not forced enough upon those who do not take to it naturally. Who are the foremost men of our cities in business and professions? Men from the country, with strong muscles and clear brains, even if not so highly cultured, and morals fitting to one raised in an old fashioned orthodox town. Let the early careers of the men who have been eminent leaders in the world be a chart for all the young people of the present day.

If you ask the question, what is the best plan to school our boys and girls for success in life, I can answer no better than to copy from Galton of England: "To gain energy of body and mind, good health, great independence of character, tenacity of purpose, practical business habits." Do your children get energy of body and mind, good health, great independence of character, tenacity of purpose, and practical business habits? Go still farther: Granting that the foregoing are or should be hereditary traits, do our schools tend to develop them? Education is coming to mean only knowledge received at school; and the practical knowledge which is of the utmost value in making a business or professional man, which is obtained out of school by observation, is being scoffed at. Men today take much more pride in referring to their college days than in speaking of the little country school-room where they obtained their foundation.

Finally let me say, in the name of all that is dear and sacred, let us have a regard for the generations which are to take our children's places. Don't add to their woes; don't increase their maladies; don't transmit to them more diseases or lunacies. Train the mind less and the body more. Strive to hasten the reform of the present school system and methods toward developing the child into a perfect being, physically, mentally and morally.

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